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11/12/2003 05:06 PM

To Christopher Lichens/R9/USEPA/US@EPA
cc Dave Taylor <tayor.dave@epamail.epa.gov>, Ed Modiano <edm@demaximis.com>, Dave Chamberlin <chamberlindc@cdm.com>, Sharon Wallin
bcc
Subject Additional Inverstigation Phase 1A Memo, Omega Site

Chris:

Attached for your reference and in concurrence with our understandings is a copy of the technical memorandum and associated figures addressing the additional investigation relative to the Phase 1a Area activities.

If you have any questions regarding the memorandum or figures, please feel free to contact me.

Regards,

Chuck Additional Invest-Phase 1a EPA memo.doc Omega-Ph1a-Fig01.pdf Omega-Ph1a-Fig01-PZ Diag-Model.pdf

CDM

Memorandum

To: Chuck McLaughlin

From: Sharon Wallin

Date: November 11, 2003

Subject: Additional Investigation in the Phase 1a Area
10500-37240-T1.GW.Phase1a
10500-5.2.3

On August 21, 2003, the Omega Chemical Site PRP Organized Group (OPOG) convened a Technical Workshop in Irvine, California to evaluate existing Site information and discuss recent findings regarding subsurface lithology and groundwater quality in the Phase 1a area. The workshop identified the need for additional investigation in the Phase 1a area to (a) evaluate the lateral extent of possible channel-like deposits identified in the area of Putnam Street well OW8, (b) identify, if possible, the lateral extent of Non-Aqueous Phase Liquid (NAPL), and (c) define the distribution of elevated levels of 1,4-dioxane recently identified at the location of well OW8. The additional data will also allow for additional evaluation of the type of extraction well (horizontal vs. vertical), and the respective location(s) (Putnam Street vs. Washington Boulevard) and number of extraction wells.

A total of 12 borings to approximately 85 feet below ground surface (bgs) in the Phase 1a area were proposed during the workshop (see attached Figure 1). Four borings proposed in the On-Site Soils RI/FS Work Plan would be advanced on-Site in order to collect Site-specific data in the area of the loading dock sump. The on-Site work would be performed early, prior to implementation of the On-Site Soils RI/FS Work Plan. Four borings would be advanced on the adjacent Terra Pave property, with four borings also advanced on Putnam Street. Because an understanding of subsurface lithology is critical to the success of the investigation, the collection of continuous lithologic samples was proposed from all boring locations.

In addition, a Membrane Interface Probe (MIP) will be utilized to assist in defining the extent of NAPL at the three locations shown on Figure 1. The MIP is advanced with a direct push rig and gives continuous, real-time total VOC readings at one-foot intervals. Because the results are qualitative and do not speciate the individual VOCS, a second boring will be advanced adjacent to each MIP location in order to collect up to three soil samples for VOC (by EPA Method 8260B) and 1,4-dioxane analysis (by EPA Method 8270C). In addition, continuous soil samples for lithologic description will be collected from each adjacent boring.

On October 27 and 28, 2003, a Geoprobe direct-push rig was utilized to advance and sample the three borings (GP1 through GP3) located in the northern parking lot currently leased by Star City Auto Body. Three soil samples for VOC and 1,4-dioxane analyses were collected from borings GP1 and GP2. A MIP boring was originally proposed for boring location GP3, however, due to the detection of organic vapors during field PID screening and other visual and olfactory indications of contamination, additional soil samples (a total of eight) were instead collected from the boring. Boring GP3 was advanced at the approximate location of a former underground storage tank at the Site. All eight samples were submitted for VOC and 1,4-dioxane analyses. As described in Section 6.3.1 of the On-Site Soils RI/FS Work Plan, an Encore sampler was used to collect all soil samples for laboratory analysis. The five remaining borings (four at Terra Pave and one at C&I Electric) will be advanced and sampled once access is obtained.

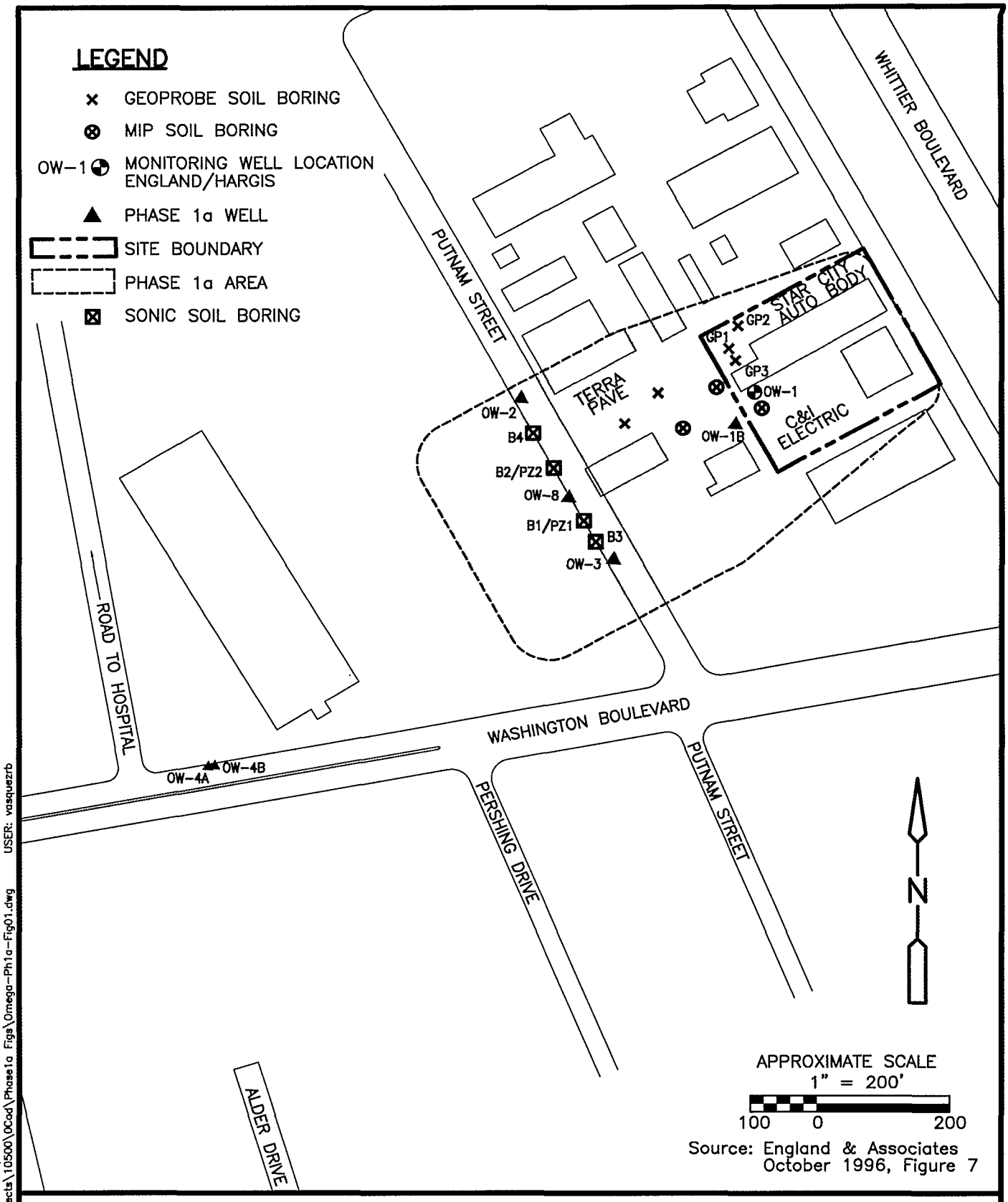
A sonic drilling rig was used to advance the four borings (B1 through B4) on Putnam Street during November 4 through November 8, 2003. A continuous soil core for lithologic logging purposes was collected from all four locations. Soil samples for laboratory analysis were not collected. Two of the borings were subsequently converted to 2-inch diameter piezometers (PZ1 and PZ2) for use as monitoring points during proposed aquifer testing at the location of well OW8. Typical construction details for the piezometers are illustrated in Figure 2. Following installation, both piezometers will be developed by bailing, swabbing, and pumping.

A 12-hour constant rate aquifer test will be performed during the week of November 17, 2003. The testing will be performed in general accordance with the procedures detailed in Section 2.1.1 of the SAP Addendum for Additional Investigation in the Phase 1a Area (CDM, May 31, 2002). The SAP Addendum described procedures for performing four-hour constant rate testing at the locations of wells OW2, OW3, OW4a, and OW8. These initial tests were performed in March 2003, with the findings presented in the draft Report Addendum for Additional Data Collection in the Phase 1a Area (CDM, June 27, 2003).

Pressure transducers will be installed in the pumping well and piezometers prior to the initiation of aquifer testing. Well OW8 will initially be step-tested for approximately one hour per step at four rates ranging from approximately 10 to 25 gallons per minute (gpm). The primary purpose of step-testing is to select a pumping rate for the 12-hour constant rate test. Based on the earlier aquifer testing results, it is anticipated that the well will be able to sustain a pumping rate of 20 to 25 gpm during the 12-hour test. During testing, the discharge rate will be monitored using an in-line flowmeter and totalizer.

Water levels will be monitored and recorded automatically with transducers/dataloggers. Manual water levels will also be collected using water level meters. Water level measurements will be collected during both pumping and recovery using standard logarithmic progressions. Prior to the termination of pumping, a water quality sample will be collected from well OW8 for analysis of VOCs and 1,4-dioxane, in accordance with the procedures described in the SAP Addendum. Water generated during pumping will be temporarily stored in a 21,000 gallon Baker tank, and transported to the Demenno/Kerdoon facility in Compton, California.

The findings of the additional investigation will be presented in the revised Report Addendum for Additional Data Collection in the Phase 1a Area. USEPA comments dated October 15, 2003 to the draft report will also be incorporated in the revised report.



Source: England & Associates October 1996, Figure 7

OMEGA CHEMICAL

Omega Site Phase 1a Area Boring and Well Location Map

CDM

Figure 1

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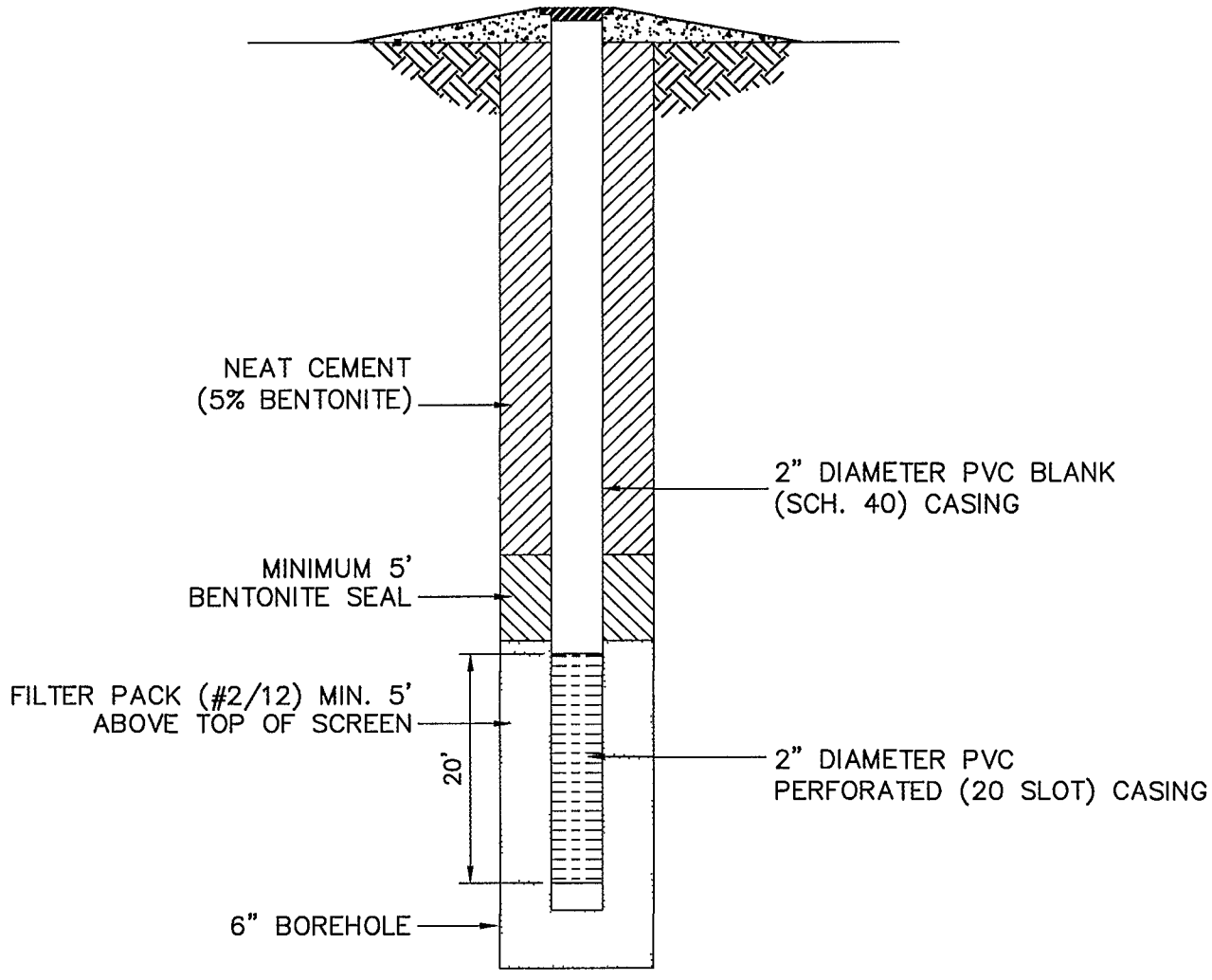

OMEGA CHEMICAL

Typical Construction Diagram for Conventional Piezometer

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Figure 2

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